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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 989,365	11-20-2001	George F. Fanta	0152.98	1129

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USDA-ARS-OFFICE OF TECHNOLOGY TRANSFER
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PEORIA, IL 61604

EXAMINER

BISSETT, MELANIE D

ART UNIT PAPER NUMBER

1711

DATE MAILED: 05-07-2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,365

Applicant(s)

FANTA ET AL.

Examiner

Melanie D. Bissett

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to an article, classified in class 428, subclass 532.
 - II. Claims 13-20, drawn to a method for rendering hydrophilic a hydrophobic polymeric substrate, classified in class 427, subclass 398.1.
2. The inventions are distinct, each from the other because of the following reasons:
3. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product could be made by spreading a starch composition onto a plastic substrate.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Curtis Ribando on 30 April 2003 a provisional election was made with traverse to prosecute the invention of group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 11-12 both recite the limitation "plastic" in line 3. There is insufficient antecedent basis for this limitation in the claim. For the purpose of the present action, the examiner will treat "plastic" as "hydrophobic polymeric substrate".

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Skinner et al.

12. Skinner teaches a film forming starch polyacrylonitrile graft copolymer spread onto a plastic substrate (abstract). Example IV shows the coating of a tetrafluoroethylene (PTFE) sheet with a starch-hydrolyzed polyacrylonitrile graft copolymer, where PTFE is known as a hydrophobic plastic material.

13. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Osaka Printing Ink Mfg. Co. as evidenced by Lewis.

14. Osaka discloses a printing material comprising a substrate, including plastic film, and a starch-containing coating agent (abstract). The starch component includes potato starch, rice starch, cornstarch, wheat starch, and tapioca starch (p. 2 lines 46-51), and the plastic film includes polyethylene, polypropylene, and PET films (p. 4 lines 51-53). Lewis defines starch as having about 25% amylose, showing cornstarch as composed of 25% amylose and 75% amylopectin. Thus, one skilled in the art would clearly envision a starch comprising about 25% amylose by the mention of "starch" or "cornstarch". Three-dimensional articles, having three-dimensional substrates, are noted in the invention (p. 6 lines 46-49).

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15. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Toppan Printing Co Ltd.

16. Toppan discloses plastic films or sheets, including polyethylene or polypropylene, coated with a water-soluble starch resin (abstract).

17. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nitsukan Kogyo as evidenced by Lewis.

18. Nitsukan Kogyo discloses a cornstarch-coated polyethylene, polypropylene, or polyester film (abstract). Lewis defines starch as having about 25% amylose, showing cornstarch as composed of 25% amylose and 75% amylopectin. Thus, one skilled in the art would clearly envision a starch comprising about 25% amylose by the mention of "starch" or "cornstarch".

19. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Top Foods.

20. Top Foods discloses a plastic film coated with a starch, where the example shows the use of polyethylene as the plastic film (abstract; example).

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skinner et al.

23. Skinner applies as above, failing to mention the coating weight of starch/area polymer substrate. Skinner does teach a broad range of 2-98% of starch component in the film, showing film thicknesses of 0.05 inches (col. 2 lines 5-12; examples). The articles have improved adhesion and absorbency (col. 1 lines 4-11). It is the examiner's position that it would have been prima facie obvious to use any amount of starch component necessary to optimize adhesion and absorbency of the coating. Such an alteration would affect the starch coverage on the substrate.

24. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osaka Printing Ink Mfg. Co.

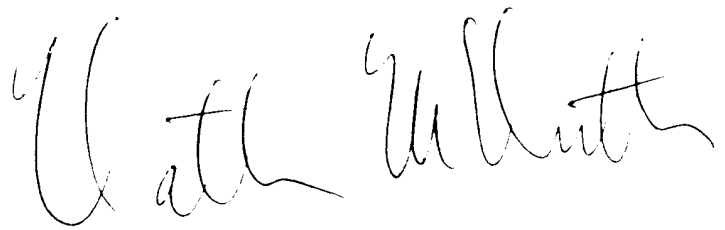
25. Osaka applies as above, failing to mention the coating weight of starch/area polymer substrate. Osaka does teach a range of 2-20% of starch component in the coating agent, showing improved drying time, scratch resistance, and adhesion (abstract; p. 2 lines 39-42). The thickness of the coating would affect both the drying time and the scratch resistance of the coating. It is the examiner's position that it would have been prima facie obvious to use any amount of starch component at any thickness necessary to optimize adhesion, drying time, and scratch resistance of the coating. Such an alteration would affect the starch coverage on the substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb
May 2, 2003



NATHAN M. NUTTER
PRIMARY EXAMINER
GROUP ~~420~~ 1711